1.1.3 High Speed Train Alternative

The Authority has defined a statewide high speed train (HST) system capable of speeds in excess of 200 miles per hour (mph) (320 kilometers per hour [km/h]) on dedicated, fully grade-separated tracks, with state-of-the-art safety, signaling, and automated train control systems. State of the art high speed steel-wheel-on-steel-rail technology is being considered for the system that would serve the major metropolitan centers of California, extending from Sacramento and the San Francisco Bay Area, through the Central Valley, to Los Angeles and San Diego. Figure 1.1-3 shows the High Speed Train Alternative for the Bay Area-to-Merced Corridor.

The High-Speed Train Alternative includes several corridor and station options. A steel-wheel on steel-rail, electrified train, primarily on exclusive right-of-way with small portions of the route on shared track with other rail is planned. Conventional "non-electric" improvements are also being considered along the existing LOSSAN rail corridor from Los Angeles to San Diego. The train track would be either at-grade, in an open trench or tunnel, or on an elevated guideway, depending on terrain and physical constraints.

For purposes of comparative analysis, the HST corridors will be described from station-to-station within each region, except where a by-pass option is considered when the point of departure from the corridor will define the end of the corridor segment.

The Bay Area-to-Merced corridor can be broadly divided into three regional segments. Each segment has several alternative alignments for all or a portion of the length of the segment. Each segment may be further subdivided for analyzing and reporting potential impacts. The various segment options, along with station locations, are described below.

Segment 1 – Merced to San José

In this segment, all alignments would be on an exclusive guideway with separate tracks for high-speed trains and would connect to the Sacramento-to-Bakersfield high-speed train corridor. Two separate corridors are being studied:

Corridor 1A. This corridor would run between Merced and San José, via Pacheco Pass and Gilroy. Two options for the alignment are being considered:

- Gilroy Option: This alignment would extend from Merced through the San Joaquin Valley and Pacheco Pass, through Gilroy, and then north along the Caltrain/Union Pacific Railroad (UPRR) rail corridor. Within this option, two suboptions are under consideration – the alignment of each is a reflection of the design speed.

  Stations would include Los Baños (near I-5) in the San Joaquin Valley, Gilroy (near the existing Caltrain Station), and the existing San José (Diridon) Station.

- Gilroy Bypass Option: This alignment would extend from Merced through the San Joaquin Valley and Pacheco Pass and then north along the Caltrain/UPRR rail corridor.

  Stations would include Los Baños (near I-5) in the San Joaquin Valley, Morgan Hill (near the existing Caltrain Station), and the existing San José (Diridon) Station.

Figure 1.1-3a:
High Speed Rail Alternative – Bay Area-to-Merced Region

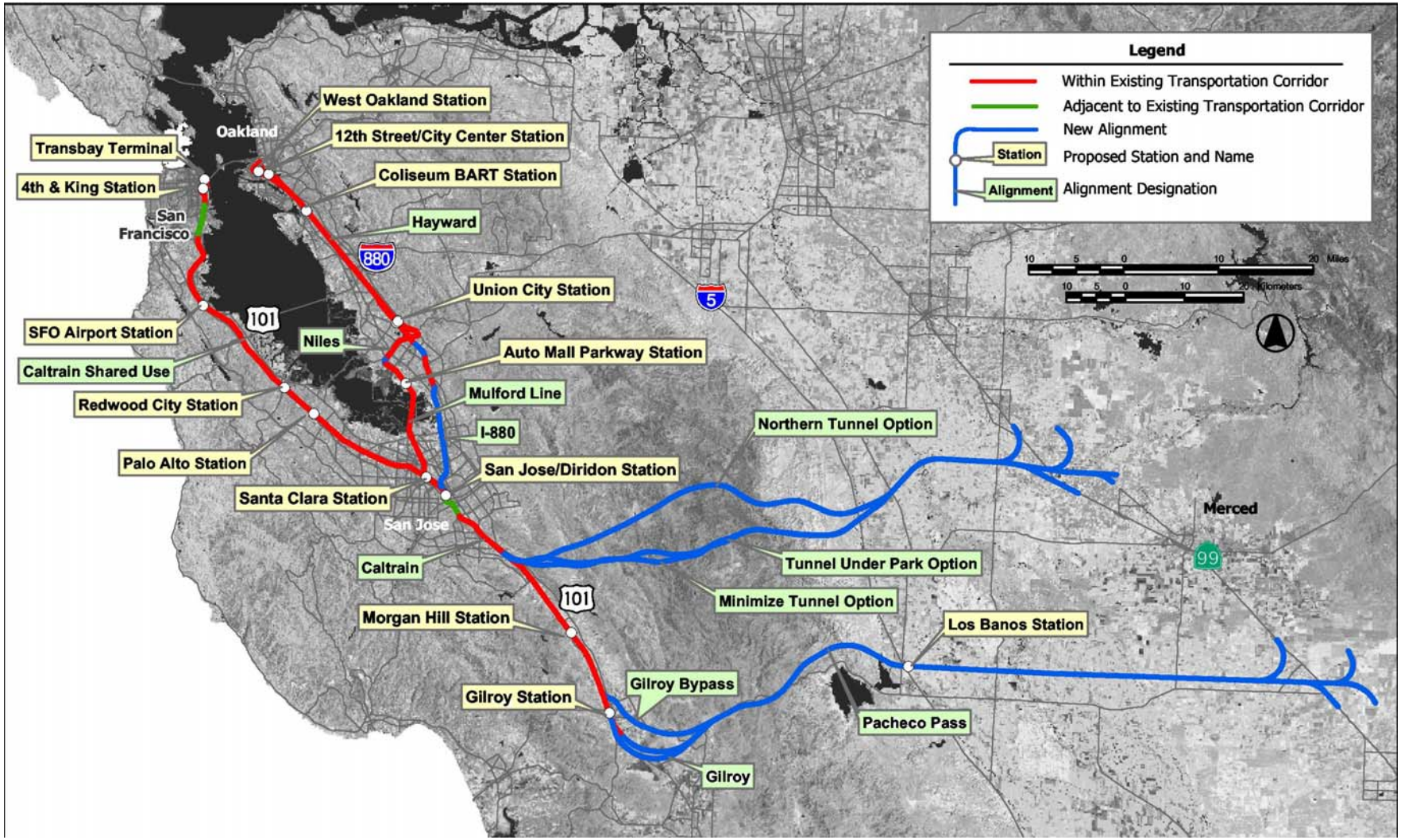
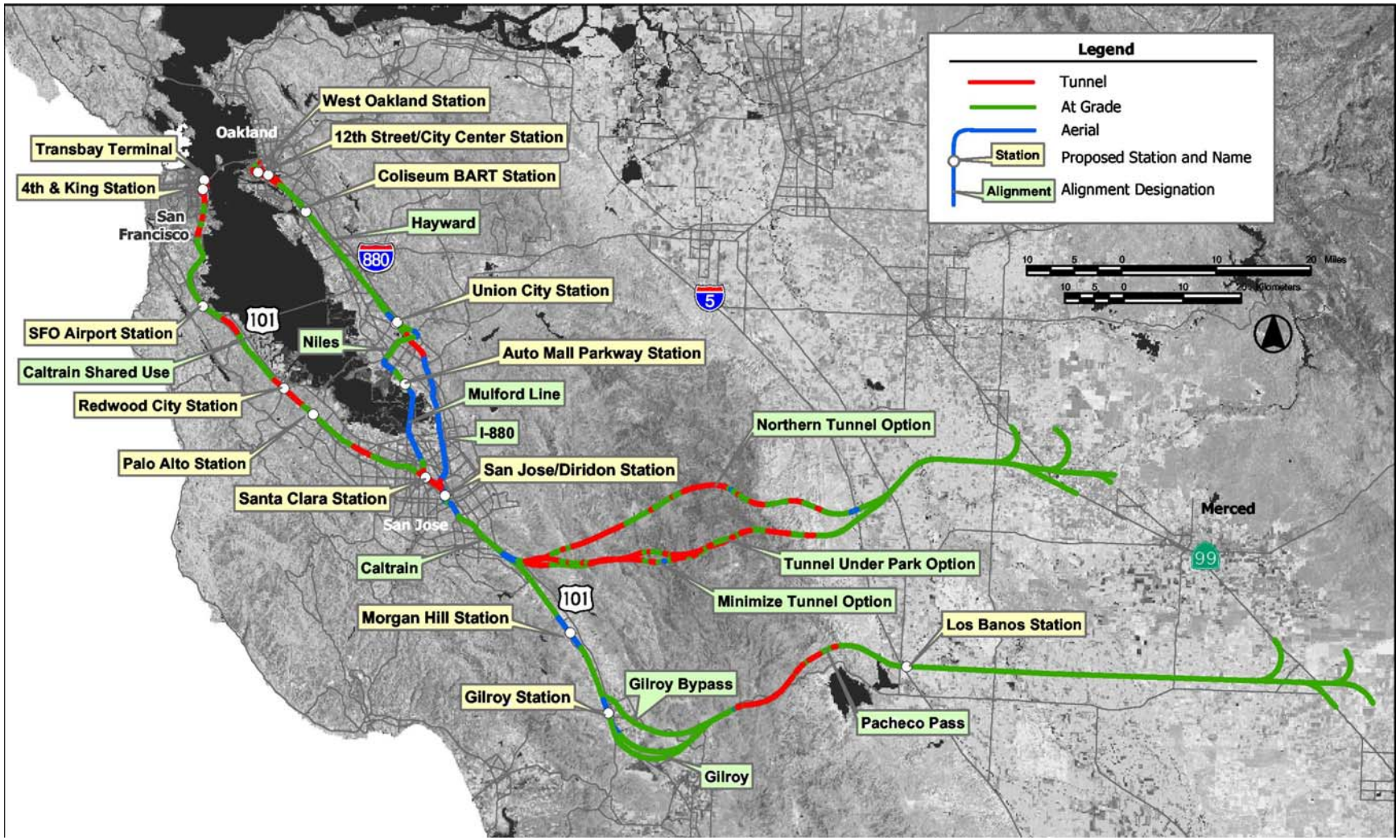


Figure 1.1-3b:
High Speed Rail Alternative – Bay Area-to-Merced



Corridor 1B. This corridor would run between Merced and San José, via Atwater and across the Diablo Mountain Range and would include one station – at the existing San José (Diridon) Caltrain Station. Three options for the alignment are being considered:

- Northern Tunnel Option: This alignment would emanate from the BNSF rail corridor or the UPRR corridor near the town of Atwater, north of Merced. The alignment would extend west across the San Joaquin Valley passing north of the town of Newman. The tracks would cross the Diablo Mountain Range in a series of tunnels, passing north of Henry Coe State Park. The alignment then would connect with the Caltrain/UPRR rail corridor north of SR 85.
- Tunnel Under Park Option: This alignment is similar to the Northern Tunnel Option except that the segment through the Diablo Mountain Range would cross Henry W. Coe State Park primarily in tunnel. The alignment then would connect with the Caltrain/UPRR rail corridor north of SR 85.
- Minimize Tunnel Option: This alignment is similar to the Tunnel Under Park Option except that the segment through the Diablo Mountain Range would cross Henry W. Coe State Park primarily at-grade. The alignment then would connect with the Caltrain/UPRR rail corridor north of SR 85.

Segment 2 –San José to San Francisco

There is one alignment being considered in this segment; it would provide for high-speed trains sharing tracks with Caltrain commuter trains. The entire alignment would be grade-separated, and all Caltrain stations would have four tracks or by-pass tracks.

Stations would include an optional station at Santa Clara; a station in either Palo Alto or Redwood City; a station in Millbrae near the San Francisco International Airport; and in San Francisco, a station at Fourth and King streets and at the lower level of the proposed new Transbay Terminal.

Segment 3 –San José to Oakland

There are two options under consideration for the alignment in this segment.

- I-880 Option: From San José, this alignment would follow north along I-880 and then transition to UPRR's Hayward rail line.

  Stations would include the planned Warm Springs Bay Area Rapid Transit (BART) Station in Fremont or the Union City BART Station; the Oakland Airport/Coliseum BART Station; and either the West Oakland Station or the 12th Street/City Center Station in Oakland.

- Mulford Line Option: From San José, this alignment would travel north along UPRR's Mulford rail line to the UPRR's Niles Line and then onto UPRR's Hayward line.

  Stations would include the Auto Mall Parkway Station or the Union City BART Station; the Oakland Airport/Coliseum BART Station; and in Oakland, either the West Oakland Station or the 12th Street/City Center Station.

2.0 BASELINE/AFFECTED ENVIRONMENT

2.1 STUDY AREA (0.25 MILE) DEFINED

The Study Area for visual resources is defined as ¼ mile from corridors and around stations. This is the extent of area where a change in landscape features would be most noticeable to viewers, and new features introduced into the landscape could begin to dominate the visual character of the landscape.

2.2 EXISTING CONDITIONS AND FUTURE BASELINE (GENERAL DESCRIPTION OF REGIONAL LANDSCAPE FEATURES)

Six viewing points have been selected in this region that are associated with representative landscapes in the region that are typical of landscapes along the alternative corridors and around station sites. For each viewpoint description, a map identifies the location and direction of the view and a photograph illustrates the landscape visible from the viewpoint.

Landscape "typologies" are described below for each of the selected viewpoints. Each viewpoint is described briefly, along with the reason that it was selected for analysis. The landscape visible from each viewpoint is described in terms of distinguishable (dominant) features that characterize the color, texture, line and form in the fore-ground, middle-ground, and back-ground.

Figure 2.2-1: Location of Viewpoint 1

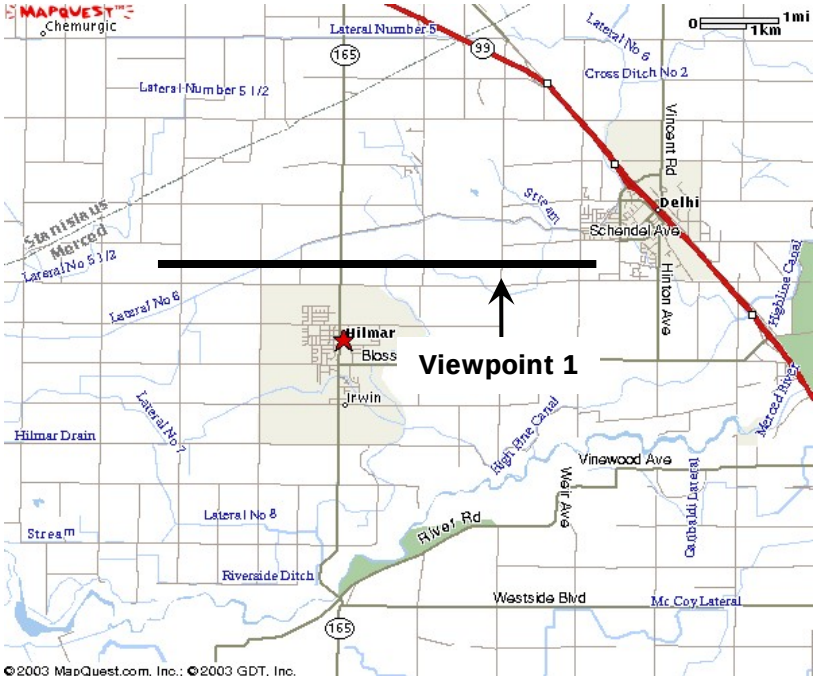


Figure 2.2-2: Viewpoint 1

- Viewpoint No. 1

  Location: HST Northern Diablo alternative, Central Valley, looking north along Griffith Road toward August Road (east of town of Hilmar). HST crosses view from left to right (west to east) in front of farm buildings in background.

  Reason for selection of viewpoint: Location shows typical view of HST full-height embankment crossing the Central Valley (common to both Central Valley alignments).

  Typology: Central Valley Agricultural Landscape (typical also of other agricultural landscapes in Bay Area to Merced region).

  Description: Flat land characterized by orderly Cartesian geometry of crop fields, farm roads, fence and pole lines, and wind breaks, punctuated by barns, houses, sheds, water towers and other agriculture-related structures. Dominant feature is horizontal ground plane. Note: In areas near west edge of Central Valley (also in Gilroy and Morgan Hill area), mountain backgrounds are dominant feature.

- Viewpoint No. 2

  Location: Looking northeast toward historic train station, town of Gilroy. HST station platforms are elevated behind existing station building and aerial track structure (viaduct) crosses view from left to right.

  Reason for selection of viewpoint: View is typical of integration of elevated HST with existing Amtrak and Caltrain stations, many of which are historic structures in traditional urban settings.

  Typology: Traditional Urban Town Center.

  Description: Historic core of city or smaller urban community in Bay Area, typified by mixed residential, commercial, and institutional uses in early to mid-20th Century contiguous buildings, average heights of two to three stories, minimal setbacks from streets, mature public landscaping, pedestrian-oriented streetscapes. Active renovation of buildings and streets is common feature of this typology. Dominant visual features are picturesque architecture, mature street trees, and channeled street perspectives.

Figure 2.2-3: Location of Viewpoint 2

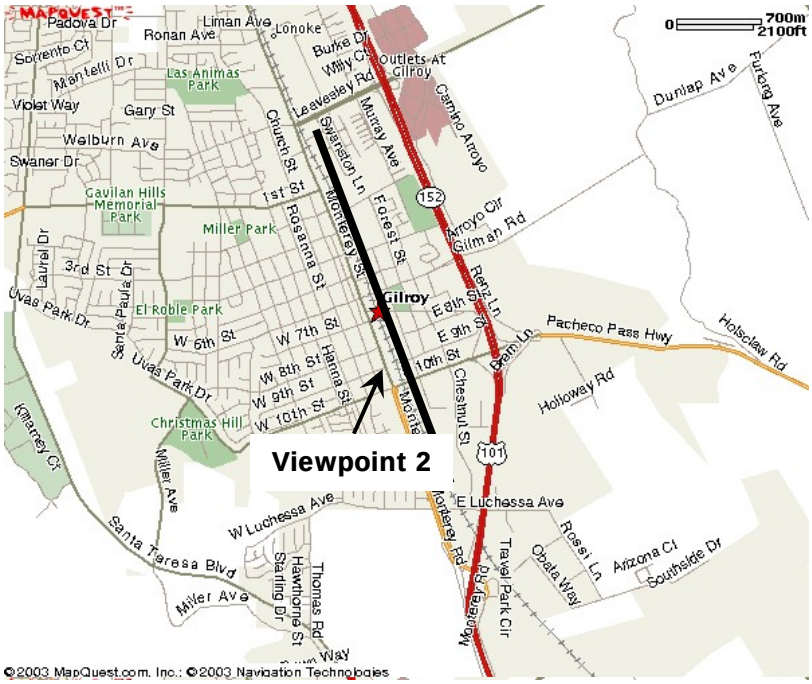


Figure 2.2-4: Viewpoint 2

- Viewpoint No. 3

  Location: Looking east along SR-152 in Pacheco Creek Valley, two miles (approx.) east of Casa de Fruita. HST aerial structure (viaduct) crosses highway from near left to far right and enters tunnel portal on hillside in background.

  Reason for selection of viewpoint: View is typical of interjection of engineered HST structures into natural and scenic landscapes. Particular view is also typical of viewing HST from adjacent highway corridors, a common condition along many sections of HST in all study areas.

  Typology: Coastal Mountain.

Description: Natural setting characterized by mountainous and mountain valley topography typified by rolling to steep-sloped grassland with shrubs, clumps of oaks and other native (or traditional introduced) tree species, and wooded bottom land. Settlement patterns vary, from none within a specific viewshed to small farms or ranches (in bottom lands), isolated roadside businesses, and widely dispersed small communities (e.g., Casa de Fruita). Dominant visual feature is vertical topography in middle ground and background.

Figure 2.2-5: Location of Viewpoint 3

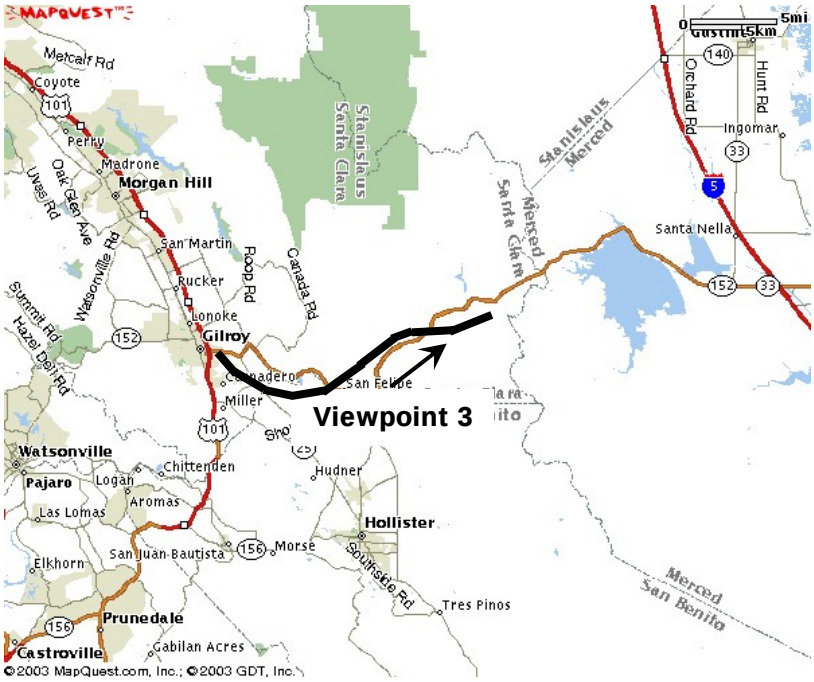


Figure 2.2-6: Viewpoint 3